Financial Assurance
Frequently Asked Questions

Can DTSC please provide a table with the current financial assurance amounts for hazardous waste facilities?

The table attached to this document is DTSC's most recently compiled data. They reflect the value of the financial assurance mechanisms as of June 30, 2005.

Permits are issued for a fixed term not to exceed ten years. Permits for operating land disposal facilities are required to go through a permit review every five years. Financial assurance must be updated annually for inflation. For new and renewal permits, the facility must submit a revised Part B application that includes a revised cost estimate. In addition to these opportunities to review/update cost estimates, in 1999, DTSC began an independent initiative to review cost estimates and financial assurance for all facilities. Therefore, all of the cost estimates for open and closed California facilities are being reviewed. During this review, if a cost estimate is inadequate and needs to be increased, DTSC will accomplish this by either: 1) increasing the cost as part of the permit renewal if the permit renewal process will be completed soon; or, 2) through a permit modification process (either Class I* or agency-initiated modification). By July 2006, PCAD will have completed the review and cost estimation for 143 facilities and ensured implementation for 110 facilities (implementation means that the financial assurance mechanism is in place) out of a total of 157 of fully permitted Treatment, Storage, Disposal or Transfer (TSDTs) facilities. Additionally, the cost estimates are reviewed on a regular basis as follows:

- During permit renewal (generally every 10 Years),
- During the review of a class 3 modification request,
- During the five year permit review for operating land disposal facilities,
- For corrective action facilities without a permit, DTSC would conduct a review as part of the remedy selection and during the 5 year review after the remedy has been conducted.

Why do some facilities have only closure financial assurances and some facilities only have postclosure financial assurances?

Closure financial assurance is required for all treatment, storage and disposal facilities. Postclosure permits are only required for facilities where wastes were placed into or onto the land (e.g., surface impoundment, waste piles (without a base or liner), tank system, in a landfarm, or into a landfill. That is, wastes are left in place in these specified units. If the facility does not meet the "waste left in place" criteria, financial assurance for postclosure care is not required. The facilities that only have postclosure mechanisms are "waste left in place" facilities that are already in the postclosure period. That is, they have completed

closure and are in postclosure. Active land disposal facilities have both closure and postclosure financial assurance. For those facilities that do not require postclosure permits but do require postclosure care (operation, maintenance and monitoring), financial assurance is also required to ensure that this work would be conducted.

Why do some facilities have corrective action financial assurances? What types of "corrective actions" do these financial assurances cover?

Corrective action is the process where an owner/operator addresses all unacceptable risks to human health and the environment from the release of hazardous waste or hazardous constituents at the facility. The process typically includes an initial site assessment, site characterization, site stabilization, selection and implementation of the remedy. Financial assurance for corrective action is required once the remedy has been selected. While DTSC are investigating the facility, financial assurance for corrective action is not required. Of the facilities that are in corrective action, many are not yet at the remedy selection phase.

Typical activities covered by a financial assurance mechanism include: installation, operation and maintenance of a groundwater extraction well; sampling and analysis, contaminated soil excavation, treatment, and or disposal; design, installation, operation and maintenance of a soil vapor extraction system. Although financial assurance is not required until remedy selection, some facilities may provide financial assurance for interim measures (IMs). IMs are early cleanup actions designed to control, contain, and/or remove previously identified contaminants.

Sudden and non-sudden liability financial assurance is only required of operating facilities. Why aren't facilities that are going through closure and postclosure required to have financial assurances for sudden and non-sudden liability?

Financial assurance for liability is **not** required for post closure and facilities that have **completed** closure. That is, a facility that is "closed" but has not received a closure certification from DTSC is still required to maintain financial assurance for liability. The logic behind this is that a facility that has completed closure presents a minimal risk to third parties. One of the things that financial assurance for liability provides is timely payment to injured, third parties. It does not indemnify the operator. Unlike closure, post closure, and corrective action financial assurance, liability financial assurance is administered independently from DTSC. That is, DTSC can make no claim on the mechanism, unless DTSC is

an injured third party. DTSC also doesn't administer the mechanism. That is, DTSC does not decide who gets paid, how much, etc. The injured party makes the claim directly to the administrator of the mechanism [e.g., insurance company, surety, trustee, bank, or corporation (as in the case of a financial test/corporate guarantee)]. A landfill in post closure is "stable" and is just being maintained and monitored. So it should not represent a risk to neighbors.

Has financial assurance been required by the state since 1982?

Yes, Health and Safety Code section 25245 which requires hazardous waste facilities to provide closure and post closure financial assurance was passed in 1982. Section 25200.10 added financial assurance for corrective action in 1988. In 1999, section 25355.2 was added to chapter 6.8 to require financial assurance for operations and maintenance activities at State Superfund sites.

The IT Group operated several landfills (with about 20 years left of the financial assurance) and declared bankruptcy. What are the specific details as they relate to this situation?

There are four former IT Group landfills in California: Panoche, Vine Hill Complex, Montezuma Hills, and Benson Ridge. Panoche and the Vine Hill Complex are large hazardous waste landfills in the San Francisco Bay Area that closed in 2001 and 1999, respectively. Montezuma Hills and Benson Ridge are smaller hazardous waste landfills located in Northern California that closed in 1992 and 1993, respectively. All four facilities have postclosure permits and require ongoing postclosure operation, maintenance and monitoring. The financial assurance mechanism that covers postclosure for all four facilities is two prepaid insurance policies through AIG International for $38.5 million that will expire in 2029. Since funds have already been used for postclosure activities, there is about $28 million remaining between the two policies. This amount should provide sufficient funding for the four landfills through 2022.

The owner of the facilities, the IT Group, declared Chapter 11 bankruptcy in January 2002. DTSC and the California Attorney General's Office vigorously pursued the bankruptcy. As a result, DTSC entered into a consent order with the newly created IT Liquidating Trust that required additional financial assurance to cover the revised postclosure cost estimate of $53.5 million through 2034 (This covers the thirty year period as required by law.). The IT Liquidating Trust was formed at the insistence of DTSC and the California Attorney General's Office to continue postclosure at the four facilities. The initial assets of the trust were the two insurance policies and $1 million. To address the funding shortfall and provide funding for an extended postclosure period, DTSC is pursuing

potentially responsible parties (PRPs) to provide additional postclosure funding. The shortfall in funding for the thirty-year period is $24.5 million.

The financial assurance mechanisms allowed by DTSC are: certificate of deposit, financial test/corporate guarantee, insurance policy, letter of credit, surety bond, and trust fund. Are these outlined in statute or regulations?

This is essentially correct. However, a certificate of deposit is only allowed for non-RCRA facilities under the "alternative mechanism." The alternative mechanism allows DTSC to approve additional financial assurance mechanisms not specifically mentioned in regulation as long as the proposed alternative is at least equivalent to the other financial mechanisms listed in regulation. Typical alternative mechanisms that DTSC has accepted are certificates of deposit, secured savings accounts, time deposit agreements, etc. The financial assurance mechanisms allowed for each activity (closure, postclosure, and liability) and permit status (permit or interim status) are detailed in regulation [all regulation references are in Title 22 of the California Code of Regulations], §§66264.147, 66265.143, 66265.145, and 66265.147. Note that the regulations may allow a particular mechanism for one activity/permit status, but not another. For example, a facility with a permit may use a surety bond guaranteeing performance of closure (performance bond) [§66264.143(c)]. But a performance bond is not an available financial assurance mechanism for closure at a facility in interim status (§66265.143).

It seems that DTSC generally prefer trust funds as financial assurance mechanisms? Can DTSC explain why? Also, what issues/problems/concerns do DTSC have about the other financial assurance mechanisms?

A trust fund is secured with negotiable property (money). This makes its funds the most readily accessible of the mechanisms. If DTSC needs to access funds to complete closure or postclosure, the trustee **must** make the funds available. Although a surety bond guaranteeing payment, a letter of credit, or an insurance policy all provide for the payment of funds; there are issues with collecting payment including where the funds will be held, stability of the issuing company, etc. DTSC has held surety bonds issued by surety companies that have later failed, essentially making the bond worthless. A letter of credit is essentially just what it says, "credit." Several insurance companies have failed. A financial test or corporate guarantee is a "promise" that is based upon the "value" of the corporation. Generally, trust funds are the safest, most secure financial assurance mechanism available. They are secured by a tangible asset (cash). The trustees

that the regulations allow are only financial institutions that are examined by federal and state agencies; which provides DTSC with an additional measure of oversight.

Some of the problems with the mechanisms are summarized in this table:

Surety Bonds Payment	• depends on financial stability of surety company • bonds may be cancelled or invalidated • requires the creation of an associated trust account to access funds
Performance	• requires "performance" of operator • does not necessarily guarantee payment to beneficiary for "non-performance" • difficult to "collect" • requires the creation of an associated trust account to access funds
Letter of Credit	• relies on solvency of bank issuing letter of credit • requires bank specific procedures for payment from letter of credit • letters are generally collateralized, that is, they are secured by property. If the status of that property changes, a bank may decide to cancel that letter of credit • requires that the full amount of the letter of credit be drawn upon • requires the creation of an associated trust account to access funds
Insurance Policy	• relies on solvency of insurance company issuing policy • current regulation allows the use of captive insurance • insurance company may seek to cancel policy if operator fails to make (complete) premium payments.
Financial Test / Corporate Guarantee	• relies upon the reliability of the CFO statements • relies upon the adequacy of the independent CPA's "review" and report • provides no protection for DTSC if the corporation becomes insolvent • requires "self-reporting" by the corporation if their financial situation changes and they no longer meet the requirements of the test • requires quicker response from DTSC if corporation appears to be failing (less time to react) • existing regulations provide little to no "warning" for DTSC, if corporation is failing

Do facilities make an annual deposit to build up a trust fund when they are in operation, when they are in closure, and/or when they are in postclosure?

A facility is required to complete payments into a trust fund for closure **prior** to closure. The regulations allow a facility to make **up to** 10 annual payments to fully fund a closure mechanism. But if the facility making annual payments "closes" early, it must fully fund the mechanism at that point. A postclosure trust fund must be fully funded prior to closure. You will note that these payment periods anticipate the "operating life" of the facility. This is at best a guess for a landfill. There are many factors which may reduce the actual operating life. Because a landfill may "close" prior to the anticipated date, there is always the possibility that a trust fund may not be fully funded prior to the landfill ceasing operation.

If insurance is the postclosure financial assurance mechanism that is selected by the owner/operator, is he/she required to pay 30 years of premium upfront?

An insurance policy for postclosure (or closure) is different from a conventional insurance policy. The insurance company knows that a postclosure policy will result in an actual payment. Because of this, the postclosure policy is designed more like a fixed annuity. The insurance company knows what the eventual payout will be. It estimates the required investment necessary to earn enough to pay the postclosure amount and earn interest. Then it calculates the premiums necessary to provide this amount. Typically, the premiums would be paid in over a shorter period than 30 years. In any case, the insurance company would require that all the premiums are paid in well before the payout date.

Has DTSC ever encountered a situation in which the financial assurance mechanism is a financial test and the company went bankrupt?

There may be additional companies, but Pacific Gas & Electric (PG&E) is the most recent case that comes to mind. PG&E was utilizing the financial test for closure and liability of its facilities prior to the bankruptcy. (Note the additional information about PG&E in the response to a later question.) Now that PG&E is out of bankruptcy protection, they have made a request to DTSC to again utilize the financial test.

Although Southern California Edison (SCE) did not enter bankruptcy, they were unable to meet the financial test requirements and needed to provide an alternate mechanism in lieu of the financial test. (Note the information regarding San Onofre in the response to a later question.) Like PG&E, they have also requested to use the financial test again. DTSC has not approved the reuse of the financial test for either PG&E or SCE.

What is included (and/or considered) in the cost estimate calculation for the financial assurance determination?

DTSC ensures that cost estimates for closure, postclosure, and corrective action are accurate by following the process described below.

The Permitting and Corrective Action Division (PCAD) staff that review and develop estimates are trained in the cost estimate process and utilize a peer review system to ensure statewide consistency. Staff is trained to use two cost estimating software tools: CostPro and RACER. CostPro was developed by the U.S. Environmental Protection Agency to estimate closure and postclosure costs at typical hazardous waste facilities. RACER was developed for the U.S. Department of Defense to estimate closure and cleanup costs at military

installations. In addition, staff that review cost estimates meet on a regular basis to discuss problems and issues arising from these reviews. This workgroup, which reports to the PCAD Division Chief and Branch Chiefs, identifies policy issues to management for resolution. The workgroup also provides peer review on estimates that are complex or have uncertainty to ensure statewide consistency.

These two software packages use input parameters that are specific to the facility. Examples could include: the size of the area needing to be decontaminated, size and thickness of a concrete pad to be demolished and disposed, the number of groundwater wells to be sampled including the specific analysis for each sample. There are thousands of different input parameters for each program.

Some of the major cost elements such as disposal costs (a facility in closure or postclosure may have to dispose of their remaining inventory of hazardous waste at an operating facility) and certain closure costs (such as sampling, and decontamination of equipment and floors) are checked to ensure that they reflect the actual California cost data. While the software packages include costs for all or most items that would be needed for closure/postclosure, some items represent a large proportion of the total cost of the closure/postclosure and inaccuracies in the input values here could result in significant errors with cost estimates. Some of the input values where DTSC has taken additional steps to ensure that the proper cost calculations are used in the software packages include:

a. **Disposal Costs:** DTSC staff obtained facility price sheets from operating facilities and contacted both generators and disposal/treatment facilities for additional input. Although DTSC found that the price sheets were quite variable, they were generally based on the highest price that a facility would charge. Most generators will pay less than the highest price, obtaining discounts based on volume and/or repeat business. For example, if the closure plan required the complete removal of all the inventory of a facility, then the volume removed would be quite high and DTSC would expect that the facility would get a discount over the maximum price. The price range paid by generators for specific waste products can be obtained from the Environmental Technology Council (ETC) a trade group that surveys firms that ship and receive wastes.

b. **Installation of Closure Covers:** The costs used in the models are based on the actual costs incurred by IT Vine Hill, IT Panoche and the recently closed Safety-Kleen Buttonwillow landfill units (aka, Clean Harbors Buttonwillow LLC).

c. **Clean Closure on Secondary Containment and other Similar Structures:** DTSC staff obtained input from facilities, consultants, and management on factors to consider in the cost estimates for these items. For example, if the containment structures are new and in good shape, pressure cleaning is an acceptable method of performing a clean closure on the unit. Older and degraded structures will require close scrutiny and site-specific assessments in order to determine a reasonable estimate of the cost for a clean closure.

How many landfills operating will be entering closure and postclosure in the next 20 years? Which landfills?

There are three (3) active Class I landfills in California. Below is a narrative explanation of when these facilities might close:

1. **Clean Harbors Westmorland LLC (EPA ID No. CAD000633164)**

   Clean Harbors Westmorland LLC is a permitted hazardous waste facility that provides treatment, storage and disposal services for hazardous wastes. The facility is located in Imperial County, California. The property encompasses 640 acres. The facility currently utilizes approximately 33 acres for treatment, storage and disposal. The Imperial County Conditional Use Permit allows for 440,000 tons of waste per year.

   The facility has two closed landfills, one operating landfill and two proposed landfills. The proposed landfills will have a capacity of approximately 2.7 million cubic yards. According to the approved RCRA Permit Application and Report of Waste Discharge dated May 1, 1991, the facility is projected to close by 2020.

   The facility has taken no waste in the last two years, but if it began to take the maximum allowed, it would have about 5-6 years of the current permitted capacity. Based on the average volume of waste accepted over a 10 year period, the facility could operate until 2020. The Conditional Use Permit from the County allows the facility to use up to 640 acres for disposal. With a permit modification from DTSC, the facility could remain in operation beyond 2020.

2. **Clean Harbors Buttonwillow LLC (EPA ID No. CAD980675276)**

   Clean Harbors Buttonwillow LLC is a permitted hazardous waste facility that provides treatment, storage and disposal services for hazardous wastes. The facility is located in Kern County, California. The property encompasses 320 acres. The facility currently utilizes approximately 33 acres for treatment, storage and disposal.

The facility has one operating landfill (WMU 35). WMU 35 is constructed in several units. Presently, WMU 35-Cell 2 is the unit in operation. WMU 35 has a capacity of approximately 10.7 million cubic yards. According to the approved RCRA Part B Permit Application dated July 17, 1991, the facility is projected to close by 2020.

Based on the current rate of disposal, the facility has 37 years of permitted capacity. The facility is accepting approximately 350,000 tons/year waste with a remaining capacity is 9.7 million cubic yards. The current plan is for the facility to close after reaching this capacity. However, the Conditional Use Permit from the County allows the facility to use up to 320 acres for disposal. With a permit modification from DTSC, the facility could remain in operation beyond 2020.

3. Chemical Waste Management Kettleman Hills (EPA ID No. CAT00064611)

Chemical Waste Management, Kettleman Hills Facility is a permitted hazardous waste facility that provides treatment, storage and disposal services for hazardous wastes. The facility is located in Kings County, California. The property encompasses 1600 acres. The facility currently is allowed to use approximately 499 acres for treatment, storage and disposal. Current remaining capacity in Landfill B-18 is about 3 to 4 million cubic yards. Using last year's disposal rate of approximately one million cubic yards, Landfill B-18 should have 3 to 4 years of operation remaining. The proposed expanded capacity (4.5 million cubic yards) will add more than four years of operation.

A pending modification of the County's Conditional Use Permit will add an additional 230 acres for a total of 729 acres for treatment, storage and disposal. A new 63-acre hazardous waste landfill is proposed on these 230 acres with 14.2 million cubic yard of capacity that will add an additional 14 years of operation (at the current rate).

Including the proposed expansion, the total proposed operation life is 22 years, at the current disposal rate. In the last 12 years, the rate has varied from 325,000 cubic yards/year to 1.3 million cubic yards/year.

This facility could remain operational far beyond the 22 years because the facility will still have about 871 acres remaining. DTSC presumes that not all of this remaining property can be utilized for disposal because of endangered species habitat, buffer zones, or topography.

Can DTSC provide a complete list of all closed Class I landfills (that DTSC is aware of) and note which are public or private? Of these closed landfills, are the existing financial assurances adequate? If not, what is the gap? What steps is DTSC taking to address this gap?

The following is a list of former Class I landfills that DTSC can identify:

The following landfills are part of the RCRA program:

CLOSED HAZARDOUS WASTE LANDFILLS (RCRA)*	
Acme Fill Corporation	Private
Big Blue Hills Disposal Site	Public
BKK Sanitary Landfill	Private
Forward Landfill	Private
IT Corporation - Benson Ridge Facility	Private
IT Corporation - Montezuma Hills	Private
IT Corporation – Panoche	Private
IT Corporation - Vine Hill Complex (includes Vine Hill and Baker)	Private
John Smith Road Landfill	Public
West Contra Costa Landfill, Richmond (aka, West County Landfill, Inc.)	Private

* These landfills are all currently inspected and under post closure permits. They all have adequate financial assurance coverage. However, as has been previously mentioned, PCAD is adjusting the cost estimates. So potentially, some may fall into non-compliance. DTSC would notify the operators of the deficiency, provide a reasonable period of time for compliance, and take formal enforcement on those that do not come into compliance.

The following landfills are no longer part of the RCRA program:

CLOSED HAZARDOUS WASTE LANDFILLS (USEPA Oversight – NPL Site) #	
Casmalia Disposal	Private
Operating Industries Inc.	Private

These landfills are on the National Priorities List (NPL) and are being administered under the CERCLA program. Operation and Maintenance (O&M) activities (which is similar to postclosure care) are funded by responsible parties (RPs).

The following landfills are not part of the RCRA program:

NOT IN RCRA UNIVERSE (CEASED OPERATING PRIOR TO RCRA) - USEPA Oversight – NPL Site $	
Stringfellow Hazardous Waste Site	Private

$ This landfill is on the NPL and is being administered under the CERCLA program. O&M activities are funded by RPs. The State of California is the principal RP at this site and the General Fund is paying for ongoing operations.

NOT IN RCRA UNIVERSE (CEASED OPERATING PRIOR TO RCRA -DTSC Oversight %	
Los Angeles City Palos Verdes Landfill #1	Public

% This landfill ceased operation prior to RCRA and is being administered under the DTSC Site Mitigation Program. O&M activities are funded by RPs with oversight by DTSC. DTSC oversight costs are billed to the RPs.

NOT IN RCRA UNIVERSE (RWQCB Oversight)&	
Los Angeles County Calabasas Landfill #5	Public
Omar Rendering Disposal Site (Former Darling International)	Private
Otay Landfill	Private
Simi Valley Landfill	Private

& The remaining landfills all have RWQCB oversight. The SWRCB or the specific RWQCB should be contacted for the funding sources for O&M activities at these sites.

What is the number of hazardous waste facilities that operated and closed before 1982? Does DTSC have an idea as to how many of these facilities may be potentially harmful?

The hazardous waste landfills that operated and closed prior to 1982 that DTSC know of are identified in the list above. Additional information on other hazardous waste landfills that may have operated and closed prior 1982 is difficult to obtain because the potential number of landfills is great and the information associated with these landfills is not as readily available. Identifying these landfills would be very difficult, if not impossible due to changes in terminology, definition of hazardous wastes (the term "hazardous waste" was not used prior to 1982), etc.

Identifying facilities that are "potentially harmful" is very problematic. DTSC could choose to respond on the conservative side and say that all are potentially harmful. Generally, closed commercial landfills with large amounts of waste remaining in place are the facilities that require the most postclosure care and monitoring.

Is the only financial assurance for corrective action for leakage into ground water? Has DTSC ever considered adding a corrective action financial assurance for gas leakage into the air? Why or why not? How often does this occur?

DTSC requires financial assurance for all corrective actions necessary at a site. DTSC does not view contamination impacts to groundwater any differently than any other media, which could include releases to air. DTSC requires financial assurance for corrective action at the time that the remedy is selected which is consistent with the policies and practice of U.S. EPA. Requiring financial assurance at remedy selection should ensure that the facility and DTSC would have a firm idea of the extent of contamination and a predictable outcome of the action during remedy selection. Therefore, the costs of implementation of corrective action can be accurately estimated at that time. If there were a remedy selected for an air release, financial assurance would be required to implement the remedy. At this time, there is one corrective action project with a remedy in place for soil gas that does have financial assurance. In addition, there are several land disposal facilities that are in postclosure and have gas collection/treatment systems as part of postclosure requirements; these do have financial assurance in place for gas collection/treatment.

If DTSC reviews the financial assurance amount during the permit review, then how often is a permit reviewed? Is it 10 years? Does a permit review apply to facilities that are closed or in postclosure? If not, when are the financial assurances for facilities in closure and postclosure reviewed?

Permits are issued for a fixed term not to exceed ten years (§66270.50). DTSC issues operation permits for storage, treatment, and disposal for ten years and postclosure permits for ten years. Permits for operating land disposal facilities are required to go through a permit review every five years as required in §66264.50(d). Financial assurance must be updated annually to account for inflation as described in §§66264.142 (closure) and 66264.144 (postclosure). For new and renewal permits, the facility must submit a revised Part B application that includes a revised cost estimate. The entire Part B application is comprehensively reviewed by DTSC, including the cost estimate. As DTSC have noted previously, DTSC independently began an initiative to review the cost of financial assurance for all facilities in 1999 and has expended significant resources to ensure that financial assurance is adequate. As part of DTSC's review, if the cost estimate is found to be deficient, the facility or DTSC can modify their permit to update the financial assurance using the permit modification processes. The review begun in 1999 was not mandated by statute or regulation.

Title 22 requires that the initial postclosure financial assurance mechanism cover the first 30 years of postclosure. If financial assurances for facilities in postclosure are reviewed and updated, does the postclosure period (for which the financial assurance covers) extend out the next 30 years? That is, is it a "rolling period?" Are there various interpretations of this?

Before DTSC issues a permit or permit renewal to a land disposal facility, DTSC determine if operation, maintenance, or monitoring activities will be required at the facility for the next thirty years from the date of the new permit. The regulations establish at least a 100 year postclosure period for land disposal and surface impoundment facilities [§§66264.228(a) and 66264.310(a)]. DTSC has concluded that the postclosure period for land disposal facilities is indefinite and would extend until perpetuity, since the waste remains onsite. However, it is likely that certain monitoring requirements (and possibly other postclosure requirements) could be revised over time. As a result, DTSC issues permits for 10 years and requires 30 years of postclosure financial assurance each time the permit is renewed throughout the postclosure period, based on facility-specific conditions. Additionally, DTSC can only release facilities from financial assurance requirements after all postclosure care requirements have been met [§66264.145(j)]. DTSC refer to this as a "rolling thirty-year period." For other facilities that require postclosure care or other long-term operation, maintenance, or monitoring, the period of financial assurance is based on site-specific conditions.

Do cost estimates account for equipment upgrades or require the best available technology?

Yes, cost estimates do account for equipment upgrades as repair/replacement is needed and as site operations are reviewed and evaluated. Cost estimates are required to include all the equipment necessary as included in the facilities' operation plan. Operation plans are documents that comprehensively describe all the equipment and systems onsite and how they are operated and maintained. These plans are comprehensively reviewed to ensure that the equipment and systems described can adequately perform the operation necessary. There is not any specific regulatory requirement for best available technology; however, DTSC will often require facilities to use equipment that will minimize the facilities' impact on the environment. Postclosure cost estimates are required to have costs for equipment replacement based on the estimated life of the equipment. Equipment is often upgraded during this time.

How many facilities in closure and postclosure have enforcement actions against them? What are the enforcement actions?

Currently there are 13 facilities that have enforcement actions against them; 10 are in postclosure and the remaining three are in closure. The enforcement actions against these 13 facilities are summarized as follows:

- 10 issued a Statement of Violations/Notice to Comply (SOV) (eight postclosure, two closure) for Class II violations.
- One postclosure SOV tied to an existing enforcement order (BKK).
- One postclosure facility with a Stipulation and Order (settled case).
- One facility in closure with a pending enforcement order (in negotiation with facility - draft order sent to facility).

Does statute or regulation dictate what must be reviewed during the inspections of hazardous waste facilities?

No, there is nothing in either statute or regulations specifying what must be reviewed during an inspection. However, there is guidance and policy from US EPA and DTSC for inspectors. For financial assurance reviews, the reviews are conducted by trained analysts. These analysts use guidance from US EPA when conducting the financial assurance document reviews.

What are the penalties/ramifications for financial assurance violations (e.g., not making an annual deposit to build up a trust fund or not increasing the value of a letter of credit)?

Section 25187 allows DTSC to impose an administrative penalty for violations of statute or regulation up to $25,000 per violation per day. Each situation is unique. To aid staff,

DTSC provides guidance documents. To help inspectors (and financial assurance analysts) determine the appropriate enforcement action for a violation, a specific guidance document is available. The guidance [Enforcement Response Policy (DTSC EO-02-003-PP) is available on our web site at www.dtsc.ca.gov and click on the "Laws, Regs & Policies" link. Locate the "Policies and Procedures" link and follow it to the "Managing Hazardous Waste" link to view the guidance.], helps staff classify violations and choose the appropriate enforcement option based upon the specifics of the case involved. If penalties are appropriate, staff is required to use the penalty calculation regulations (found in title 22, California Code of Regulations, division 4.5, chapter 22, article 3 – Assessment of Administrative Penalties, §§66272.60 through 66272.69). The regulations require DTSC to take two key factors into consideration in calculating a penalty. The two factors are potential for harm and extent of deviation. Once these key factors have been considered, the regulations require that DTSC consider adjustment factors such as intent and economic benefit. DTSC has a guidance document on economic benefit [Guidelines for Calculating the Economic Benefit of Noncompliance (EO-02-001-GD) is available on our web site at www.dtsc.ca.gov and click on the "Laws, Regs & Policies" link. Locate the "Policies and Procedures" link and follow it to the "Managing Hazardous Waste" link to view the guidance.].

The economic benefit guidance document has some examples, one of which is a scenario similar to the one mentioned above. Here is the example of how DTSC might calculate economic benefit for this type of financial assurance violation:

ABC was permitted on April 1, 1995, and first received waste May 1, 1995. The permit was issued for five years. The rate at which funds should have been deposited is 20% of the closure cost estimate per year.

- *Closure cost estimate: $450,000;*
- *Historical balance(s) in trust: (1) May 1, 1995, $5,000; (2) May 1, 1996, $7,000; (3) May 1, 1997, $8,150; (4) May 1, 1998, $9,200;*
- *Current balance in trust fund: $9,200;*
- *Period of noncompliance: three years, or four payments; and*
- *Interest rate: 5%.*

Date Trust Payment Due	***Closure Cost Estimate***	***Permit Length***	***Required Yearly Payment to Trust***	***Required Amount in Trust***
May 1, 1995	*$450,000*	*5 years*	*$90,000*	*$90,000*
May 1, 1996	*$450,000*	*5 years*	*$90,000*	*$180,000*
May 1, 1997	*$450,000*	*5 years*	*$90,000*	*$270,000*
May 1, 1998	*$450,000*	*5 years*	*$90,000*	*$360,000*

The economic benefit would be calculated as follows:

Date Trust Payment Due	***Required Trust Balance Less Actual Trust Balance***	***Yearly Interest Rate***	***Economic Benefit***
May 1, 1995	*$90,000 - $5,000*	*5%*	*$4,250*
May 1, 1996	*$180,000 - $7,000*	*5%*	*$8,650*
May 1, 1997	*$270,000 - $8,150*	*5%*	*$13,092*
May 1, 1998	*$360,000 - $9,200*	*5%*	*$17,540*
		Total Economic Benefit	***$43,532***

Following are three brief summaries of recent enforcement cases that have been settled involving financial assurance violations:

Mirant LLC--case settled for $50,000 and based only on financial assurance violations. Four violations of financial assurance:

1. Failure to demonstrate financial assurance for closure;
2. Failure to demonstrate financial assurance for postclosure;
3. Failure to demonstrate financial assurance for sudden and non-sudden accidental liability; and
4. Failure to provide a copy of the liability insurance policy requested by DTSC in a letter.

San Onofre Nuclear Generating Station--case settled for $210,000 and based only on financial assurance violations. Six violations of financial assurance:

1. Failure to establish and demonstrate financial assurance for closure;
2. Failure to establish and demonstrate alternate financial assurance for closure within 120 days after company had an inability to qualify for the financial test;
3. Failure to establish and demonstrate alternate financial assurance for closure within 30 days of notice that DTSC had made a finding that company no longer qualified for the financial test;
4. Failure to establish and demonstrate financial assurance for sudden accidental occurrence liability;
5. Failure to establish and demonstrate alternate financial assurance for liability coverage within 90 days after the company had an inability to qualify for the financial test; and
6. Failure to establish and demonstrate alternate financial assurance for liability coverage within 30 days of notice that DTSC had made a finding that the company no longer qualified for the financial test.

Pacific Gas & Electric, Diablo Canyon--case settled for $193,715 and includes operating violations --penalties for these were fairly minimal. Ten financial assurance violations:

1. Failure to establish and demonstrate financial assurance for closure;
2. Failure to submit notice to DTSC of inability to qualify for the financial test within 90 days of such inability;
3. Failure to establish and demonstrate alternate financial assurance with 120 days after the end of its latest complete fiscal year;
4. Failure to provide reports of financial condition as required by DTSC letter;
5. Failure to establish and demonstrate alternate financial assurance with 30 days of notice that DTSC had made a finding that company no longer qualified for the financial test;
6. Failure to establish and demonstrate current and valid financial assurance for liability coverage;
7. Failure to submit note to DTSC of inability to qualify for the financial test within 90 days of such inability;
8. Failure to establish and demonstrate alternate financial assurance within 120 days of the latest complete fiscal year;
9. Failure to provide reports of its financial condition as required by DTSC letter;
10. Failure to establish and demonstrate alternate financial assurance with 30 days of notice that DTSC had made a finding that the company no longer qualified for the financial test.